

# Econometrics 2

Module 4, 2024-2025

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## Course information

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**Course Website:**

**Instructor's Office Hours:** Discuss with TAs

**Class Time:**

**Room Number:**

**TAs:** Yaroslav Prokhorskiy and Alexander Kalchevskiy

## Course description

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This is a second part of the introductory econometrics sequence. The objective of the course is to familiarize students with basic concepts of econometric analysis. During the course students learn how to apply econometric models to the various kinds of cross-sectional and panel data. The participants of the course use STATA software and do practical exercises.

## Course requirements, grading, and attendance policies

Students are expected to possess a solid foundation in statistics, calculus, and matrix algebra, along with having completed the econometrics-1 course. The course comprises 14 lectures and 7 seminars. The assessment will be divided into three parts, distributed across the duration of the module, each centered around distinct research papers. The objective of this course is for you to master the methods and application of the econometric techniques discussed in class. To do this, you will have three main parts: final Referee Report 30%, Presentation 25%, Short Assignments total 25% (groups of 2). Attendance and Participation is very important in this course, so it takes 20% of the total grade. The referee report and presentation must be based on a different paper and will be made from a list provided by the instructor, all of which are pertinent to the subject matter of this course.

## Course contents

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Week 1: Regression as a Weighted Average, Introduction to Randomization

Week 2: Least Squares, Instrumental variables and Systems of Equations.

Week 3: Maximum likelihood estimation and Binary choice models.

Week 4: Multinomial choice, Ordered choice.

Week 5: Censored models. Sample selection. Statistical Inference.

Week 6: Count data. Mixed models.

Week 7: Panel and clustered data. Linear panel models. Within, between and other estimators.

### **Description of course methodology**

A typical lecture includes a theoretical part on course material with applications. The focus will be on how this econometric method can be applied for practical applications.

### **Sample tasks for course evaluation**

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Write a short report discussing the econometric method applied in the paper “Long-run effect of dissolution of Monasteries” by James Robinson. Pay careful attention to methodological issues that arise from using the current method and how authors try to overcome it. Provide an assessment of how an alternate method could be applied to the same data. Discuss assumptions behind each of the methods (original vs hypothetical).

### **Course materials**

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#### **Suggested Textbooks and materials**

- “Introductory Econometrics: A Modern Approach” by Jeffrey Wooldridge (4th edition), South-Western Cengage Learning, 2009.
- “Mastering Metrics. Josh Angrist and Steven.
- Selected Papers from top economics and political science journals.

#### **Additional materials**

“Econometric Analysis of Cross Section and Panel Data”, MIT Press, 2002 (WA)

Cameron, A. Colin and Pravin K. Triverdi “Microeconometrics: Methods and Applications”, (8<sup>th</sup> edition), Cambridge University Press, 2009

Further references will be provided during the course.

### **Academic integrity policy**

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Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated and will be punished. This includes self-plagiarism: students cannot submit projects that are identical to or with minor modifications of those submitted for other courses. Major modifications might be allowed but must receive an explicit approval from the professor before submitting. Failure to declare overlap or submitting projects with high similarities to existing works will result in severe punishment. Students must adhere to these regulations as part of the NES Honor code. Course projects are subject to random plagiarism checks.